

Update this Quiz


Info Results Preview Edit

202306UECM34630E2a

Start again

Review of preview

Started on	Sunday, 23 July 2023, 09:27 PM
Completed on	Sunday, 23 July 2023, 09:27 PM
Time taken	8 secs
Grade	0 out of a maximum of 10 (0%)

1  
Marks: 1


A random variable follows a Poisson distribution with  $\lambda = 0.7$ . Calculate the third raw moment of the distribution. \_\_\_\_\_

Answer:

[Make comment or override grade](#)

Incorrect  
Correct answer: 2.513

Marks for this submission: 0/1.

2  
Marks: 1


Dental Insurance Company sells a policy that covers two types of dental procedures: root canals and fillings. There is a limit of 1 root canal per year and a separate limit of 2 fillings per year. The number of root canals a person needs in a year follows a Poisson distribution with  $\lambda = 1.193$ , and the number of fillings a person needs in a year follows a Poisson distribution with  $\lambda = 2.386$ . The company is considering replacing the single limits with a combined limit of 3 claims per year, regardless of the type of claim. Determine the change in the expected number of claims per year if the combined limit is adopted. \_\_\_\_\_

Answer:

[Make comment or override grade](#)

Incorrect  
Correct answer: 0.2446

Marks for this submission: 0/1.

3  
Marks: 1

For a certain  $(a, b, 0)$  distribution,

- $a = 0.5884773662551441$ ,
- $b = 2.9423868312757206$ , and
- $1000p_0 = 4.856935749618865$ .


Calculate the probability of exactly 1 events occurring times 1000, i.e.  $1000p_1$ . \_\_\_\_\_

Answer:

[Make comment or override grade](#)

Incorrect  
Correct answer: 17.149181

Marks for this submission: 0/1.

4  
Marks: 1

For a discrete probability distribution, you are given the recursion relation  $p_k = (2.64/k + 0.88)p_{(k-1)}$ ,  $k = 1, 2, \dots$

Determine  $1000p_4$ . \_\_\_\_\_

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 4.358368

Marks for this submission: 0/1.

5

Marks: 1

For a zero-modified Poisson distribution,  $p_1 = 0.1524$ ,  $p_2 = 0.061$ , calculate the probability of 0. \_\_\_\_\_

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 0.7665

Marks for this submission: 0/1.

6

Marks: 1

For a zero-modified negative binomial distribution,  $r = 2$  and  $\beta$ ,  $p_0 = 0.20$ , and  $p_1 = 0.0533$ . Find  $\beta$ . \_\_\_\_\_

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 0.068267

Marks for this submission: 0/1.

7

Marks: 1

For a zero-modified Poisson distribution,  $p_1 = 0.0005$ ,  $p_2 = 0.0019$ , calculate the variance of the distribution. \_\_\_\_\_

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 7.596

Marks for this submission: 0/1.

8

Marks: 1

For a distribution in the (a, b, 0) class, you are given that

- $p_1 = 0.015444390850476832$ ,
- $p_2 = 0.02517921022203432$ , and
- $p_3 = 0.03420835399851243$ .

Determine  $100,000p_4$ . \_\_\_\_\_

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 4182.777481

Marks for this submission: 0/1.

9

Marks: 1

$N^M$  is a discrete random variable with probability function which is a member of the (a, b, 1) class of distributions. You are given

$$P(z) = 0.41 + 0.59[e^{5.50(z-1)} - e^{-5.50}]/[1 - e^{-5.50}]$$

Calculate the variance of the distribution. \_\_\_\_\_

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 10.5625

Marks for this submission: 0/1.

10 

Marks: 1

For a zero-modified ETNB distribution, you are given: (i)  $p_1 = 0.693155$ , (ii)  $p_2 = 0.023577$  and  $p_3 = 0.002859$ . Determine the probability of 0. \_\_\_\_\_

Answer:



[Make comment or override grade](#)

Incorrect

Correct answer: 0.279823

Marks for this submission: 0/1.

 [Moodle Docs for this page](#)

You are logged in as [Yong Chin Khian](#) ([Logout](#))

UECM3463-202305-EZZ